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E S S A Y

UPON THE

Q U E S T I O N

What Proportion of the Produce of ARABLE LAND
ought to be paid as RENT to the LANDLORD?

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E S S A Y
UPON THE
Q U E S T I O N, &c.

WHAT proportion of the produce of arable land ought to be paid as rent to the landlord? is a question which the Edinburgh Society recommended to the consideration of the public, in the year 1753.

Long before that period, a spirit for improvement began to appear in Scotland; and, perhaps, from a few successful attempts made at first, this laudable spirit at length took root so firmly, that many gentlemen became, not only good practical farmers, but, in consequence of skilful management, made solid improvements upon their estates; and thereby added considerably to the national stock.

Men,

Men, who had thus distinguished themselves, were undoubtedly, of all others, best qualified to explain what the Edinburgh Society considered as a mysterious part of their profession; and it is much to be regretted, that, after a lapse of more than twenty years, none of them have been disposed to communicate their thoughts upon a subject which has hitherto been overlooked by all the professed writers on husbandry.

This profound silence, it must be owned, is the more discouraging, as it seems to suggest an impossibility of forming such rules for exacting rents as can be depended upon, or applied in common practice. But why take this for granted? Is not an inquiry into the truth of this matter recommended by a very respectable society? Does not the solicitude, arising from novelty, natural curiosity, and the utility that may possibly result, all unite to promote such an inquiry? Besides, for our encouragement, we know, that the soldier who makes a brave resistance, though he should be forced to surrender at last, will not be branded with dishonour. Let us then proceed in our inquiry, and not tamely abandon the question, without offering, at least, some defence.

The vulgar observation, 'That every arable farm ought to produce three rents,' that is to say, one for the landlord, one for the expence of management, and one for the farmer, has been so long used in common language, as to have

have become almost proverbial. When understood in the limited sense conveyed by the words, it leads to error; but if, instead of deciding that every arable farm ought to produce three rents, it be understood to mean that, under any given scheme for a rotation of crops, there is to be found land of one certain quality only, the product of which can justly divide into three equal shares, I am apt to conclude, that such an interpretation may be held as a good rule, and may be applied to discover what rents become due from all the kinds of arable land. At least, it is necessary to premise, that the calculations, hereafter following, were formed and adjusted by this rule, in the year 1754, when the rates of wages, prices of corn, &c. were lower than they are at present.

Having thus laid open my plan in general, previous to an investigation of the points chiefly in view, it will not be improper to make some preliminary observations upon the following heads, viz. What may be deemed the proper extent of an arable farm.—The duration of leases.—Farm stock.—Expence of management.—And that particular kind of land, the produce of which will admit of being divided into three equal shares.

What may be deemed the proper Extent of an Arable Farm.

A good arable farm (under which description, I mean land of such a quality as will admit of being kept in constant tillage) may be either too large or too small. When limited to such a size as will afford the tenant, by a reasonable exertion of industry, such a profit as will maintain him and his family comfortably, it may be said to be confined within due bounds.

To produce this effect, I will suppose that one ploughland, or sixty Scots acres, is too small, and that two ploughlands, or one hundred and twenty, is not too large. Were a farm of such an extent, as to afford the farmer much more than is due to the rank he holds in society, so far he would be moved out of his station, or not properly confined to it. Supposing he possessed twice the quantity of land necessary, he would not only take up the room, but, if industrious, enjoy the profits which ought to support two families, tending too much to depopulate the country; or, if he was slothful and indolent, in that case, he would probably content himself with cultivating such a portion of the land only, as would support his family and pay his rent; affording a strong

strong proof that the farm had been let at an under-value, and that the community must be defrauded.

If, on the contrary, we suppose a farm were of so small an extent, that it could not afford so much profit to the farmer as is due to his station, in this case, being unable, from the utmost exertions of industry, to live and pay his rent, having the means of living in his own hands, he would naturally provide a subsistence for his family in the first instance; the consequence of which would be, that, in a short time, he would unavoidably fall in arrears to his landlord, and the landlord, from a consumptive revenue, to those with whom he had dealings; and thus a train would be laid, not only to ruin many individuals, but also, in this instance, to injure the community.

Extremes, therefore, ought to be avoided; but where mediocrity is observed, the farmer will be under the necessity of exerting a reasonable share of industry, the landlord will get an equitable rent for his land, and the community be furnished with a just supply of the fruits of it.

On the Duration of Leases.

As to the duration of leases, I have made choice of twenty-one years, for no better reason, I own, than because

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it is common ; however, to promote the improvement of poor, or what farmers denominate unknown land, it will be worth gentlemens while to consider, whether twenty-one years be a reasonable term of lease ; because, if that duration has not, in some degree, proved unfavourable to the necessary work of improvement, How is it to be accounted for, that so great a portion of the lands in Scotland still remain in the same poor state they were originally ? With diffidence I suggest, that were leases, of this species or land, given for a specified term of years, and, at the expiration of these years, finally to terminate with the life of the person who then happened to be in possession of the farm ; perhaps this, or a more encouraging method, might give some idea of property, which could not fail of being a strong incitement to industry and good management.

On the other hand, in countries fully improved, the duration of leases seems to be a matter of less consequence. Where land is in an improved order, and the rules prescribed in the lease obligatory upon the tenant to keep up that order, every field will, as it were, receive the stamp of a certain value, and, comparatively speaking, will pass as currently in the hands of farmers for that value, as a crown piece does for five shillings ; so that, in countries brought to this state, twenty-one years may be deemed a reasonable term of lease ; but land, like silver ore, must be refined before it is brought to standard pitch, and few farmers will undertake

undertake so tedious and expensive a process, if the time for carrying it into execution be so circumscribed as not to afford a fair prospect of an equitable and ample retribution.

Farm Stock.

This article of farm stock, as well as that of the expence of management, it must be observed, were adjusted in the year 1754, and consequently will not exactly correspond with the rates of wages, grain, &c. which govern at present; but the differences hence arising, may, I apprehend, be easily adjusted, by aid of the tables, to this or any period of time, as will be shewn in the sequel, when rents, payable partly in corn and partly in money, are taken under consideration.

I have already supposed, that a farm containing one hundred and twenty Scots acres of good land, is sufficiently large to maintain a family comfortably; and the stock corresponding thereto, as prices stood in the year 1754, I value at two hundred pounds: Thus

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Eight

((10))

Eight horses at L. 10 each	80	0	0
Seed corn	51	0	0
Two carts, and other implements	49	0	0
Ready money	20	0	0
	L. 200	0	0

Expence of Management.

Under the first head, it is presumed, that an arable farm, containing one hundred and twenty Scots acres of good land, and occupied by two ploughs, may be deemed sufficiently large for affording a comfortable subsistence to a farmer's family. Under this is to be considered the annual expence attending said two ploughs ; and this is the more necessary to be correctly ascertained, as leading to discover the quality of that particular kind of land, the produce of which will justly divide into three equal shares, agreeable to the explanation already given of the old observation, which says, that every arable farm ought to produce three rents, assigning one of those shares for defraying the expence of management, one for the landlord, and one for the farmer's use. The accompt I state as follows :

Wages

Wages of four ploughmen and a herdsman, at L. 3 each.	L. 15 0 0
In oatmeal two pecks <i>per week</i> , is bolls 32½, at 11s. 6d. the boll.	18 13 9
Smith and wright supposed.	1 10 0
An assistant thresher supposed.	5 0 0
A weekly allowance to the plough- men and herdsman of sixpence <i>per week</i> .	6 10 0
	46 13 9
Horses eight, at 5 bolls each <i>per an- num</i> , exclusive of light corn 40 bolls, at 9s. 7½d. the boll	19 2 5
Grass and straw supposed	14 7 7
	33 10 0
Harvesting 80 acres, at 5s. the acre	20 0 0
	L. 100 3 9

From this accompt, it appears, that the expence of one
plough was, in the year 1754, something more than fifty
pounds.

*Of that Kind of Land which admits of a Division of its
Produce into three equal Shares.*

In land, fit for the culture of corn, there are great variety of soils. Some are so prolific, that less than a fourth part of the value of its product will defray the expence of management, and, at the same time, afford for the farmer's use, a sum equal to the expence of management, and a rent to the landlord of more than twice the expence of management; while, on the other hand, there are soils so sterile, that the expence of management will exhaust almost three fifth parts of the produce of the farm, leaving little more than two fifth parts to be equally divided between the landlord and tenant; but still there is one species of arable land, the produce of which will properly divide into three equal shares, the scheme of rotation, and the expence of management being first known.

In order to discover the quality of this kind of land, I took my example from East Lothian, and adjusted the expence of management to the practice of that county in 1754, when the average prices of corn, for twenty-one years preceeding that period, were, according to the Mid-Lothian fiars, as stated in the Edinburgh Almanack, as follows,

viz. wheat, 14 s. the boll; pease, 9 s. 6½ d.; barley, 11 s. 6½ d.; and oats, 9 s. 7½ d.

Now, as it is shewn, that the expence of management, incurred upon a farm containing one hundred and twenty Scots acres, was, in the year 1754, one hundred pounds, it is obvious, that, in order to enable a farm of the said extent to pay a rent of one hundred pounds, and to afford the like sum for the farmer's use, its neat produce must necessarily amount to three hundred pounds. And hence arises the following question, viz. What quality must that land possess, which is capable of producing annually the neat sum of three hundred pounds, upon a given scheme of rotation of crops?

What may be accounted the most beneficial scheme for a rotation of crops in East Lothian, is foreign to the present inquiry; it is sufficient, in general, to say I proceed upon a supposition, that, when a farm of one hundred and twenty acres is occupied in such a manner, as to have upon it twenty acres of wheat, twenty acres of pease, twenty of barley, twenty of grass, twenty of oats, and twenty of fallow, it may be reckoned a middling good scheme; and that this will shew the method of calculating upon any other scheme of rotation that may be adopted.

Upon adjusting matters to experience as well as I could, I found that a farm of one hundred and twenty acres, pro-

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ducing, at an average of the four grains, five and a half bolls the acre, and of hay one hundred and sixty-five stone the acre; or, in other words, eight bolls of wheat, three of pease, six and a half of barley, and four and a half of oats, must be composed of land just of that quality, as will yield the neat value of three hundred pounds, when computed upon the medium prices of grain for twenty years immediately preceeding the year 1754: Thus,

						<i>£.</i>	<i>sh.</i>	<i>d.</i>
Wheat	20 acres, at 8 bolls per acre, is 160, at 14 shillings per boll					112	0	0
Pease	20 ditto 3 ditto	60	9	6½ ditto		28	12	6
Barley	20 ditto 6½ ditto	130	11	6½ ditto		75	0	5
Oats	20 ditto 4½ ditto	90	9	7½ ditto		43	13	6
Acres	80	bolls 22	bolls 440			259	6	5
Hay	20 acres, at 165 stone the acre, is 3300, at 4 d.					55	0	0
Straw computed,	at 1 s. 8 d. for the straw of every boll of corn, and							
there being 440 bolls,	amounts to					36	13	4
						350	19	9
Deduct for annual seed						50	19	9
Remains a neat produce of						L. 300	0	0

Hence, if these computations appear to be formed upon tolerably exact principles, the above farm, containing one hundred and twenty acres of land, occupied by two ploughs, attended with an expence of management of one hundred pounds a-year, returning five and a half bolls of corn the acre, for the eighty acres under grain, and grass and

and straw, to the value estimated ; I say, these particulars admitted, it seems reasonable to conclude, that the farm under consideration must necessarily be composed of land, the produce of which will properly divide into three equal shares, viz. one hundred pounds for rent ; one hundred pounds for expence of management, and one hundred pounds for the farmer's use.

Having thus endeavoured to discover what particular kind of land it is, the produce of which properly divides in the manner mentioned, I shall now proceed to consider what rents will be adequate to other farms of the same dimensions, but composed of land differing from the former in point of quality, and this I propose to do upon the following principles : *First*, That of whatever quality of land any farm in East Lothian may consist, the expence attending the management of one plough-land, or sixty acres, will be the same. *Secondly*, That the value of the stock consequential to the support of a plough will be equal. And, *thirdly*, That the sum reasonable to be allotted for the farmer's use, upon all farms of one hundred and twenty acres extent, producing at the rate of five and a half bolls of corn the acre at a medium, as well as upon all farms of the above dimensions, but composed of better land, yielding more than five and a half bolls, be restricted to one hundred pounds a-year ; a rule, however, which cannot be applied to land, as it becomes inferior in quality,

quality, and to return less than five and a half bolls the acre.

In order to discover how far the application of these rules will bring rents to coincide with those exacted in the common way of practice, let it be demanded what rent will be due from a farm of one hundred and twenty acres, known to yield five bolls and three firlots at a medium for eighty acres of it under corn.

Produce at five and a half	
the acre is already found	
to be	L. 300
Add for the odd firlot $\frac{1}{12}$ d	
part	13,63636
	313,63636

Deduct, viz.

For expence of management	L. 100	0	0
For farmer's use	100	0	0
		200	0
Remains for rent			113,63636

And $\frac{113,63636}{12} = 94696 = 18s. 11d. 2704 \text{ dpts.}$ the acre,

The answer required.

And

And hence, it being obvious that L. 13,63636 becomes a common mean to be added for every advance of one fir-
lot the acre in the product above five and one half bolls the
acre. Therefore, the value of product, the farmer's allot-
ment, and the rents of the acre upon the different kinds
of arable land in East Lothian, or wherever else the expence
of management is the same as in East Lothian, and the same
scheme of rotation observed will, as it rises in quality,
and returns more than five and a half bolls the acre, stand
as in the table following.

T A B L E No. I.

Bolls per Acre.	Value of Product	Farmer's Allotm.	Rent of Farm.	Rent the Acre.	Rent the Acre.		
					L.	s.	d.
5 $\frac{1}{2}$	300	100	100	83333	16	8	
5 $\frac{3}{4}$	313,63636	100	113,63636	94696	18	11,27	
6	327,27272	100	127,27272	1,06060	1	1	2,54
6 $\frac{1}{4}$	340,90909	100	140,90909	1,17424	1	3	5,81
6 $\frac{1}{2}$	354,54545	100	154,54545	1,28787	1	5	9,08
6 $\frac{3}{4}$	368,18181	100	168,18181	1,40151	1	8	0,36
7	381,81818	100	181,81818	1,51515	1	10	3,63
7 $\frac{1}{4}$	395,45454	100	195,45454	1,62878	1	12	6,90
7 $\frac{1}{2}$	409,09090	100	209,09090	1,74242	1	14	10,18
7 $\frac{3}{4}$	422,72727	100	222,72727	1,85606	1	17	1,45
8	436,36363	100	236,36363	1,96969	1	19	4,72

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It is before observed, that, when the soil becomes such as will not afford so much as five and one half bolls the acre at a medium, there will be a deficiency in the value of the product of L. 13,63636 for every firloot short of $5\frac{1}{2}$ bolls acre; and, as we suppose, that the expence attending the management of all farms of equal dimensions in East Lothian to amount to the same sum; and further, that after this expence of management is deducted from the neat amount of the product of the farm, the remainder shall be equally divided between the landlord and tenant; I say, these principles being well founded, it is evident that a farm, returning but five bolls one firloot the acre, will incur a loss of L. 13,63636, of which sum L. 6,81818 will fall upon the landlord, and the same sum upon the tenant. This is the plan upon which the following table, No. 2. is formed.

TABLE

T A B L E No. II.

Bolls per Acre.	Value of Product.	Farmer's Allot- ment.	Rents of farm.	Rents the Acre.	Rents the Acre. s. d.	
$5\frac{1}{4}$	286,36364	93,18182	93,18182	77651	15	6,36
5	272,72727	86,36364	86,36364	71969	14	4,72
$4\frac{1}{2}$	259,09090	79,54546	79,54546	66287	13	3,09
$4\frac{1}{2}$	245,45454	72,72728	72,72728	60606	12	1,45
$4\frac{1}{2}$	231,81820	65,90909	65,90909	54924	10	7,01
4	218,18181	59,09090	59,09090	49242	9	10,18
$3\frac{1}{2}$	204,54545	52,27274	52,27274	43566	8	8,55
$3\frac{1}{2}$	190,90909	45,45454	45,45454	37878	7	6,80
$3\frac{1}{2}$	177,27272	38,63638	38,63638	32197	6	5,27
3	163,63636	31,81820	31,81820	26510	5	3,62

Thus the two preceeding tables are calculated and adjusted to the medium of money, as the prices of corn stood, at an average, for twenty-one years previous to 1754. In order to establish the principles upon which they are formed, before I proceed to other remarks, it becomes necessary to remove the force of an objection which I am aware may possibly be made to my third position, which runs thus :

‘ That the sum reasonable to be allotted for the tenant’s use,
‘ upon all farms of one hundred and twenty acres extent,
‘ producing $5\frac{1}{2}$ bolls of corn the acre, at a medium, as well
‘ as upon all farms of the above dimensions, but composed
‘ of

‘ of better land yielding more than $5\frac{1}{2}$ bolls, be restricted
 ‘ to one hundred pounds; a rule, however, that cannot be
 ‘ applied to land, as it becomes inferior in quality, and to
 ‘ return less than $5\frac{1}{2}$ bolls the acre.’

Prefuming it is tolerably well demonstrated, that one hundred and twenty acres of land, affording five and one half bolls the acre, is that kind which properly divides the value of its product into three equal shares, viz. L. 100 for management, L. 100 for rent, and L. 100 for farmer's use, I infer, that where land is so good as to return, for instance, six and one half bolls the acre, this odd boll, or the price of it, ought to go intirely to the landlord. It arises solely from the fertility of the soil; it adds nothing to the expence of cultivation, nor to the tenant's living; therefore, he has no just claim to any share of it. But it may be urged, for the same reason that the excess is due to the landlord, when the land is so good as to return more than five and one half bolls, so ought the decrement to fall upon him, when the land is so poor as to return less. It is the fault of the soil, not of the tenant's industry; he has the same stocking, bestows the same, perhaps more labour; and, Why is he not entitled to the same profit as his neighbour upon the richer farm?

Let us endeavour to prove, that such arguments have no foundation in experience or sound policy. Table No. 1. shews, that, in East Lothian, the value of the product of
 one

one hundred and twenty acres, yielding five and one half bolls the acre, amounted in 1754 to L. 300; and table No. 2. that the value of the product of the same number of acres, yielding but four bolls the acre, amounted to about L. 218. If then it was true, that the tenants upon these different farms were equally intitled to the same profits, deducting from the L. 218, for the expence of cultivation L. 100, and L. 100 more for the tenant's use, there remains for rent L. 18; and when, from this sum, the land-tax, stipend, repairs of church and minister's house are deducted, perhaps the free money due to the proprietor would not exceed ten pounds.

At this rate, a proprietor of 1200 acres of such land, set out in ten farms, could draw from his estate only the neat sum of L. 100 a-year, whilst his tenants would, each of them, have the same income, subject to a few pounds deduction for repairs, &c.

Upon this footing, land, yielding four bolls the acre, would mark the point at which the use of the plough must necessarily be laid aside; because an estate, yielding but $3\frac{1}{4}$ bolls the acre, could only defray the expence of cultivation, and pay the farmers their allotments, leaving the proprietor a beggar, without any rent at all.

Very different from this is the scheme established by constant practice; by it we are taught, that land, affording

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four-bolls the acre, is by no means of a despicable quality; perhaps three fourth parts of the arable lands in Scotland do not produce so much. One hundred and twenty acres of it, when corn was low, produced a value of L. 218; from which, when L. 100 for the expence of managing is deducted, I mean in East Lothian, there remains L. 118 to be equally divided between the landlord and tenant, or L. 59 each.

Arable land of this kind is, I apprehend, as saleable as any whatever; if we suppose the L. 59 rent to produce, clear of land-tax, stipend, &c. L. 51, and to be worth twenty-six years purchase, 120 acres of it will yield in the market L. 1326. If, on the other hand, the rent is but L. 10, as by the other plan, it will sell for no more than L. 260; not so much as a fifth part of the former price.

Hence it follows, that, if L. 260 was really the fair price, three fourth parts of the arable land in Scotland would be thrown out of culture: That the remaining fourth part could not afford so much as one half of the quantity of corn produced in Scotland at present: That three fourth parts of our arable lands would suffer a diminution in point of value of more than four fifth parts: That the number of inhabitants would soon be reduced to such a proportion as the food provided for them could maintain; and, in course, that our trade and manufactures would vanish. In short, practice, confirmed by experience, like a balance,

Balance, is adjusted, by taking weight from the heavy scale, and adding it to the light one. Under certain limitations, the same thing, I apprehend, must be done in farming. Where the land is so rich as to defray the expence of cultivation, and to afford a comfortable living to the farmer, the remainder constitutes the rent. Where the land is so poor that it will not return to the value of three rents, after deducting the expence of cultivation, common practice seems to have determined, that the remainder should be equally divided between the landlord and the tenant, leaving the parties to accommodate their manner of living to their means of subsistence.

Upon table No. 2. it is proper to remark, that, agreeable to the plan of rotation adopted, the calculations are made upon the supposition, that proportional quantities of the four grains might be produced, in a regular succession, from lands of the lowest denominations; but, as land yielding under four and a half, or four bolls the acre, may be thought unfit for the production of wheat; the rents assigned in the table below those quantities, can only shew, with precision, what rents would have been due had it been able to carry wheat. To remedy this defect, a new scheme of rotation, excluding wheat, and accommodated to cherish lands of inferior quality, must be formed; and then their rents may be easily found by the method already pointed out, which, in this place, it will not be improper to recapitulate. *First*, The expence of management, (which varies

ries so much in different counties, that, when it was fifty pounds in East Lothian for a single plough, it did not much exceed thirty in Strathmore), must be settled. *2dly*, To find out the quantities and value of product, corresponding with experience, that will answer to thrice the expence of management, which will shew the number of bolls the acre at a medium; and, *3dly*, To calculate up and down from this medium, which will compose a new table.

In order to proceed intelligibly, and without confusion, it was necessary to adhere to certain maxims. One of these was, to limit that portion of land which might afford a comfortable subsistence to a farmer's family to a certain quantity; this I did to one hundred and twenty Scots acres.

Now, when this quantity is really sufficient to answer the purpose intended, if we suppose the farmer to take one ploughland, or sixty acres more, would it, for example, where the tenant's allotment is fixed (as in table No. 1.) at one hundred pounds a year, in such case would it, I say, be unreasonable, that the odd fifty pounds arising from the third plough should be divided between the landlord and tenant? if not, a farm of one hundred and twenty acres, which formerly afforded a rent of but sixteen shillings and eightpence the acre, will, upon being enlarged to one hundred and eighty acres, afford a rent of nineteen shillings and fivepence the acre, and an addition to the farmer of twenty-five pounds a-year; or, if the
farm

farm was further enlarged to two hundred and forty acres, it would then, by the same rule, be worth twenty shillings and tenpence the acre, and an addition to the tenant of fifty pounds a-year.

But such indulgencies ought, perhaps, to be given with caution; they certainly increase the proprietors revenue, which is a tempting bait; but they tend to depopulate the country, from whence towns are chiefly supplied with inhabitants of the different ranks.

Indeed, where arable lands are of so ordinary a kind, that one hundred and twenty acres fall short of affording a reasonable subsistence to the industrious farmer, his bounds then should be enlarged, so far as to give an adequate relief, without raising the rents in the manner mentioned.

In this way, three ploughlands, or one hundred and eighty acres of such land as fall under the denomination of four bolls and a half, and four bolls, in table No. 2, will afford a rent of L. 98,8635 for the one, and L. 88,63, &c. for the other, and the same sums to the farmer; that is to say, one half more than a farm containing but one hundred and twenty acres.

When we go below the denominations of four and a firiot, or four bolls the acre, such lands seem to be unfit for constant tillage, and, probably, under a proper rotation, would an-

fewer best for the interest of parties, if two thirds of the farm be kept in grass, and one third in tillage, changing the one for the other after a few years.

After all, there is one difficulty to encounter, of so fluctuating a nature, as to evade any one fixed rule in calculation. It is this, that, although the tables shew what rents and allotments are due to the landlord and tenant, yet these do not determine the free sums each party will enjoy. On one hand, from the rent must be deducted the land-tax, stipend, and repairs of church and minister's house, &c. To these no positive name can be given. On the other hand, an allowance for wear and tear must be made by the tenant. Upon the stock, as I have stated it under that head, I am inclinable to think, that the farmer may be allowed four or five pounds a-year for keeping up his horses, and eight or ten *per cent.* interest on the cost of his farm-utensils, which may come to four or five pounds a-year more. The stock-feed the farmer carries off with him at the expiration of his lease, and the twenty pounds of ready money, is properly no part of his farm-stock. But, upon these matters, I pretend not to decide; they will properly fall under the consideration of parties at the time they treat of an agreement. I shall only observe in general, that, when these abatements are pretty equally poised, they may be said to be well adjusted.

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The foregoing tables endeavour to ascertain what rents are due from the various kinds of arable land, when payable in money at the average prices of corn for twenty-one years antecedent to the year 1754. I shall now, upon the same principles, endeavour to shew, by two different tables, what rents, payable partly in corn and partly in money, will correspond to said prices: *First*, when supposed to be payable one third of the former money-rent in wheat, one third in barley, and one third in money, from the best lands. *Secondly*, when rents are payable, exactly two third parts in wheat and barley, in equal quantities from the good lands, and one third in money; and two thirds in barley and oats in equal quantities, and one third in money from the inferior lands.

T A B L E No. III.

According to the first Proposition.

Bolls per Acre.	Rent in Wheat. Bolls.	Rent in Barley. Bolls.	Rent in Oats. Bolls.	Rent in Money. L.	Total Rents in Money.
8	112,554	136,524		78,787	236,363
7½	106,060	128,647		74,242	222,727
7¼	99,567	120,771		69,696	209,090
7⅛	93,073	112,894		65,151	195,454
7	86,580	105,017		60,606	181,818
6¾	80,086	97,142		56,060	168,181
6½	73,593	89,268		51,515	154,545
6¼	67,100	81,389		46,969	140,909
6	60,606	73,513		42,424	127,272
5¾	54,112	65,636		37,878	113,636
5½	47,619	57,760		33,333	100---
5¼	44,372	53,822		31,060	93,181
5	41,124	49,884		28,787	86,363
4¾	37,878	45,945		26,515	79,545
4½	34,632	42,007		24,242	72,727
4¼		38,070	45,651	21,969	65,909
4		34,131	40,930	19,696	59,090
3¾		30,190	36,206	17,424	52,272
3½		26,254	31,408	15,151	45,454
3¼		22,316	26,761	12,878	38,636
3		18,370	22,038	10,606	31,818

E X P L A N A -

EXPLANATION.

Suppose a farm to contain 100 acres; and to yield 6 bolls the acre at a medium, What rent in wheat, barley, and money will it afford?

For the wheat, say, If 120 give 60,606 bolls, 100 acres will give 50,505 bolls.

For the barley, say, If 120 give 73,513 bolls, 100 acres will give 61,260 bolls.

And, if we suppose the price of wheat to be 17 shillings the boll, and of barley 14 shillings and 6 pence the boll, the rent will stand thus:

Wheat 50,505 at 17 s. <i>per</i> boll	42,929 25
Barley 61,260 at 14 s. 6 d. ditto	44,913 50
	87,842 75
Money the medium of wheat and barley	43,921 375
Rent then amounts to	L. 131,764 125

H

TABLE

T A B L E No. IV.

Upon the second Proposition.

Bolls per Acre.	Rent in Wheat.	Rent in Barley.	Rent in Oats.	Rent in Money.	Total Rent in Money.
8	123,386	123,386		78,787	236,363
7½	116,267	116,267		74,242	222,727
7½	109,147	109,147		69,696	209,090
7½	102,030	102,030		65,151	195,454
7	94,912	94,912		60,606	181,818
6½	87,793	87,793		56,060	168,181
6½	80,675	80,675		51,515	154,545
6½	73,557	73,557		46,969	140,909
6	66,440	66,440		42,424	127,272
5½	59,320	59,320		37,878	113,636
5½	52,202	52,202		33,333	100
5½	48,642	48,642		31,060	93,181
5	45,083	45,083		28,787	86,363
4½	41,524	41,524		26,515	79,545
4½	37,964	37,964		24,242	72,727
4½		41,515	41,515	21,969	65,909
4		37,225	37,225	19,696	59,090
3½		32,921	32,921	17,424	52,272
3½		28,632	28,632	15,151	45,454
3½		24,338	24,338	12,878	38,636
3		20,043	20,043	10,606	31,818

These

These tables, Nos 3. and 4. are calculated to answer the rents of farms containing 120 acres, as the prices of corn stood at a medium for twenty-one years before 1754; but by them may be found the rents due from any other number of acres. To shew this take the two following examples.

First, If it was required, What rent was due from 120 acres, returning seven bolls the acre at a medium of the four grains, payable two-third parts of the value in wheat and barley in equal quantities, and one-third part in money? Table, No 4. shews, at one view, the rent to be, of wheat, 94,912 bolls; of barley, 94,912 bolls; and, of money, L. 60,606, in all, amounting to L. 181,818, or thirty shillings three pence and a fraction the acre.

Second, If the farm contained but 100 acres, and to produce as before, say, for the wheat and barley, as 120 acres give 94,912 bolls, so will 100 acres give 79,093 bolls, and the the accompt will stand thus.

Wheat, bolls 79,093, at 14 s. per boll	55,365
Barley, ditto, 79,093 11 s. 6 $\frac{1}{2}$	45,643
Money, the medium of wheat and barley L.	50,5
Value of rent in money	L. 151,512

When

When tables No 1. and 2. are compared with tables No 3. and 4. they will be found to have very different tendencies. Money-rents for arable land, fixed at a specified sum for the acre, or for the farm, are deceitful, and justice may be said to hang in a state of vibration. In the course of a lease for twenty-one years, the inequalities occasioned by good, bad, or indifferent crops or seasons, may be supposed to balance one another with tolerable exactness, so that neither the interest of the landlord or tenant may be materially affected. The great danger to be apprehended, by exacting money-rents from arable land, seems chiefly to arise from such changes in national circumstances as may consolidate prices; for as such changes happen to increase or diminish the quantity of currency, so will the prices of grain, of commodities, and of labour, &c. in general, rise or fall in a certain proportion.

It is rational for mankind to judge by what they see, and what they feel. When they see, that, within the last twenty years, a great addition of national debt has been incurred; and when they feel, that, in consequence of this debt, taxes are multiplied, and the rates of commodities, provisions, wages, &c. raised, I say, in this unfortunate situation, it is very natural to conclude that money must necessarily have lost part of its value. Whatever truth may be allowed to be in this, the fact is, that prices have, for a number of years past, been so high, and so improbable that they

they should fall soon to their wonted rates, that, I believe, no unprovided farmer would hesitate to give more than sixteen shillings and eight pence the acre for a farm of one hundred and twenty acres, known to produce five and a half bolls the acre, at a medium of the four grains, although it appears it was worth only that rent payable in money for twenty-one years before 1754.

In judging of the rents of arable land payable in money, I apprehend the chief points to be considered are, viz. *First*, To determine the quantity of acres to be contained in the farm. *Secondly*, The number of bolls, and kinds of grain, &c. it is capable of producing annually, upon a medium of years. *Thirdly*, To ascertain the quantities and kinds of grain it would pay for rent, if exacted in corn. *Fourthly*, To agree upon conversions for said corn-rents payable in money. And, *Fifthly*, To attend to the situation of the farm, with regard to markets, coal, lime, &c.

For example, we will suppose parties agree, that the farm contains one hundred and twenty Scots acres of arable land: That it will yield five and a half bolls of corn the acre, at an average of the four grains, and grass, &c. as set forth in the plan before mentioned, so as to bring out the neat value of produce to L. 300 Sterling, when prices were as rated in said plain; but that, by a new lease entered into for twenty-one years, the agreed conversion of the

grains shall be, viz. for wheat seventeen shillings the boll; for barley, fourteen shillings and six pence the boll, and so in proportion for oats and pease. Parties thus agreed, the question comes to be, What rent is due when payable in money? To bring out a solution, recourse must be had to the third or fourth table; if the last be appealed to, it will show, that the farm in question will be worth a rent payable two-thirds in wheat and barley in equal quantities, 52,202 bolls of each, and the remaining third-part in money, at the medium price of said two grains. Thus,

Wheat, 52,202 bolls, at 17 s. per boll	44,371 70
Barley, 52,202 ditto, 14 s. 6d. ditto	37,846 45
Money, medium of wheat and barley	41,109 075
	L. 123,327 225

Shewing that the same farm, the quantities of its product being always, or, upon the whole, invariable, and naturally admitting of being divided into three equal parts; I say, that, if said product, instead of being so portioned out, be previously valued in the lease by the medium of money, it will carry a greater nominal value at one time than at another; I call it a Nominal Value, because, when high prices consolidate from causes not easily removed, they will purchase no greater quantity of corn, provisions, labour, &c. than low prices formerly did.

Thus,

Thus, the farm in question, which, for twenty-one years, to 1754, yielded, from the quantities and value of its product, a net value in money of no more than L. 300, will, estimating prices as stated in the above accompt, yield, from the same quantities of product, no less than the net sum of L. 369,971675, or a rent of L. 123,327225, being twenty shillings and six pence halfpenny the acre, instead of sixteen shillings and eight pence the acre, as formerly. But still the L. 369, and the L. 300 are intrinsically of the same value; that is to say, the L. 300, in the year 1754, could purchase the same quantity of commodities, corn, labour, or other necessaries, as the L. 369 can do in the present unfortunate situation of affairs.

From what has been said upon rents payable in money, it is obvious, that, when prices are estimated merely by conjecture, as has been done in the example before us, fallacy must unavoidably ensue, and, consequently, terminate in certain loss, either to the landlord or tenant, contrary to the genius of equity.

If, therefore, parties are disposed to agree for rents payable in money, I can conceive no method more equitable than by specifying in the lease, *First*, The particular kinds and quantities of corn stipulated for the rent. And, *Secondly*, To set forth, that said corn-rent shall be liquidated by money, at the prices set by the annual fairs.

By

By this method, a year's accompt of the farm, from which I set out to form my calculations, will stand thus:

Wheat, 52,202 bolls, pable at the fiars

Barley, 52,202 ditto, payable at ditto

Money, payable at the medium price of
wheat and barley

L.

Thus, the wheat and barley being fixed to unalterable quantities, be prices what they may, and regulated by the annual fiars as they happen, those disappointments which would ensue, by previously settling prices at arbitrary rates, may be avoided; and, if thought proper, it may be left optional to the tenant whether he will deliver the corn in kind, or pay their value in money, agreeable to the rates set by said annual fiars, he always making his election in due time, suppose before the beginning of the new year.

Similar to this method is the practice of the Provost and Fellows of Eton College; which, because it may be worth imitation, I shall here transcribe in the words of the author of the Corn Tracts, published in London in 1766.

‘ The college-baker and brewer attend Windfor-market
‘ on the market-days before Lady-day and Michaelmas,
‘ and

• and bring to the Provost and Fellows an account of the
• highest prices that wheat and malt is sold for in the
• market on those days: And it cannot be doubted but
• that they are justly taken, with great care; for, accor-
• ding thereto, the rents are settled for the current year;
• it being only left optional to the tenant, whether he will
• pay in wheat and malt in kind, or in money, at said
• market-price.

		K		TABLE	
1791	1792	1793	1794	1795	1796
1797	1798	1799	1800	1801	1802
1803	1804	1805	1806	1807	1808
1809	1810	1811	1812	1813	1814
1815	1816	1817	1818	1819	1820
1821	1822	1823	1824	1825	1826
1827	1828	1829	1830	1831	1832
1833	1834	1835	1836	1837	1838
1839	1840	1841	1842	1843	1844
1845	1846	1847	1848	1849	1850
1851	1852	1853	1854	1855	1856
1857	1858	1859	1860	1861	1862
1863	1864	1865	1866	1867	1868
1869	1870	1871	1872	1873	1874
1875	1876	1877	1878	1879	1880
1881	1882	1883	1884	1885	1886
1887	1888	1889	1890	1891	1892
1893	1894	1895	1896	1897	1898
1899	1900	1901	1902	1903	1904
1905	1906	1907	1908	1909	1910
1911	1912	1913	1914	1915	1916
1917	1918	1919	1920	1921	1922
1923	1924	1925	1926	1927	1928
1929	1930	1931	1932	1933	1934
1935	1936	1937	1938	1939	1940
1941	1942	1943	1944	1945	1946
1947	1948	1949	1950	1951	1952
1953	1954	1955	1956	1957	1958
1959	1960	1961	1962	1963	1964
1965	1966	1967	1968	1969	1970
1971	1972	1973	1974	1975	1976
1977	1978	1979	1980	1981	1982
1983	1984	1985	1986	1987	1988
1989	1990	1991	1992	1993	1994
1995	1996	1997	1998	1999	2000

No. V.

A. T A B L E, by which may be found the Rents of any Number of Acres of the different Kinds of Arable Land, payable in Money; calculated upon the Principles laid down in the foregoing Plan, when Prices were, for Wheat, 14s. the Boll; for Barley, 11s. 6d. &c.

Acres.	Bolls. 8.	7½	7¼	7	6¾	6½
	L.	L.	L.	L.	L.	L.
1	1,9696	1,8560	1,7424	1,6287	1,5151	1,4015
2	3,9393	3,7121	3,4848	3,2575	3,0303	2,8030
3	5,9090	5,5682	5,2272	4,8863	4,5454	4,2045
4	7,8787	7,4242	6,9696	6,5151	6,0606	5,6060
5	9,8484	9,2803	8,7121	8,1439	7,5757	7,0075
6	11,8181	11,1363	10,4545	9,7726	9,0909	8,4090
7	13,7878	12,9924	12,1969	11,4014	10,6060	9,8105
8	15,7575	14,8484	13,9393	13,0302	12,1212	11,2121
9	17,7272	16,7045	15,6817	14,6590	13,6363	12,6136
10	19,6969	18,5606	17,4242	16,2878	15,1515	14,0151

	6¼	6	5¾	5½	5¼	5	4¾
1	1,1742	1,0606	,9469	,8333	,7765	,7197	,6628
2	2,3484	2,1212	1,8939	1,6666	1,5530	1,4394	1,3257
3	3,5227	3,1818	2,8408	2,4999	2,3295	2,1590	1,9886
4	4,6969	4,2424	3,7878	3,3333	3,1060	2,8787	2,6515
5	5,8712	5,3030	4,7348	4,1666	3,8825	3,5984	3,3143
6	7,0454	6,3636	5,6817	4,9999	4,6590	4,3181	3,9772
7	8,2196	7,4242	6,6287	5,8333	5,4355	5,0378	4,6401
8	9,3939	8,4848	7,5757	6,6666	6,2121	5,7575	5,3029
9	10,5681	9,5454	8,5222	7,4999	6,9886	6,4772	5,9658
10	11,7424	10,6060	9,4696	8,3333	7,7651	7,1969	6,6287

	4½	4¼	4	3¾	3½	3¼	3
1	,6060	,5492	,4924	,4356	,3787	,3219	,2651
2	1,2121	1,0985	,9848	,8713	,7575	,6439	,5302
3	1,8181	1,6477	1,4773	1,3069	1,1363	,9659	,7953
4	2,4242	2,1069	1,9696	1,7426	1,5151	1,2878	1,0604
5	3,0303	2,7462	2,4621	2,1783	1,8939	1,6098	1,3255
6	3,6363	3,2954	2,9545	2,6139	2,2728	1,9318	1,5906
7	4,2424	3,8447	3,4469	3,0496	2,6514	2,2538	1,8557
8	4,8484	4,3939	3,9393	3,4852	3,0303	2,5757	2,1208
9	5,4545	4,9432	4,4318	3,9209	3,4090	2,8977	2,3859
10	6,0606	5,4924	4,9242	4,3566	3,7878	3,2197	2,6510

E X P L A-

E X P L A N A T I O N.

A farm containing one hundred and twenty Scots acres, yielding seven bolls the acre at an average of the four grains, for the eighty acres under corn : Query, What is the rent payable in money when prices were as in the title of the table ?

Look in the column of acres for the number ten, and, carrying your eye forward to the column of seven bolls, opposite to the ten acres, you will find L. 15,1515, which, by cutting off three figures on the left hand instead of two, gives for one hundred acres L. 151,515. Then, in the column of acres again, look for two acres, and carrying your eye to the column of seven bolls, you will find opposite to the two acres L. 3,0303, which, by cutting off two figures on the left hand instead of one, gives for twenty acres L. 30,303 ; so the rent will be as follows :

For

(40)

For 100 acres	151,515
20 ditto	30,303
120 acres, the rent is	L. 181,818
	20
	sh. 16,360
	12
	720
	360
	d. 4,320

and this L. 181,818 divided by 120 acres, gives L. 1,515 1 equal to thirty shillings threepence and a fraction the acre.

Thus stood the rent of the 120 acres mentioned for twenty-one years from 1734 to 1754 inclusive, as the prices of corn were at a medium for that period ; but, had the lease been renewed for twenty-one years from 1754, I have already shewn, that thirty shillings and threepence the acre would have fallen short of a just and equitable rent.

In proof of this assertion, turn to table No. 4. where, in the first column, look for seven bolls, opposite you will find the rent thus stated. Wheat 94,912 bolls, Barley 94,912, and Money L. 60,606.

Now,

(141)

Now, if we suppose, that, from 1754 to 1774 inclusive, the medium price of wheat to be eighteen shillings the boll, and the price of barley fifteen, the money-rent for said twenty-one years would have been as follows:

Wheat, bolls 94,912 at 18 s. <i>per</i> boll	85,4208
Barley, ditto 94,912 at 15 s. ditto	71,1840
Money, the medium of Wheat and Barley	78,3024
Rent in money	L. 234,9072

and this sum divided by 120 acres, the rent turns out to be something more than thirty-nine shillings the acre, instead of thirty shillings and three pence as formerly.

L TABLE

No. VI.

A TABLE, by which may be found the Rents of any number of Acres of the different kinds of Arable Land, payable in Money, calculated upon the Principles laid down in the foregoing Plan, when Wheat was 14 s. per Boll, &c.

L.	Acres. 8 Bolls.	7½	7¼	7	6½	6¼
10	5,0769	5,3877	5,7391	6,1395	6,6	7,1351
20	10,1538	10,7755	11,4782	12,2791	13,2	14,2703
30	15,2307	16,1632	17,2174	18,4186	19,8	21,4054
40	20,3076	21,5510	22,9565	24,5581	26,4	28,5405
50	25,3845	26,9387	28,6956	30,6976	33,	35,6756
60	30,4614	32,3265	34,4347	36,8372	39,6	42,8108
70	35,5383	37,7142	40,1740	42,9767	46,2	49,9459
80	40,6152	43,1020	45,9130	49,1163	52,8	57,0811
90	45,6921	48,4897	51,6522	55,2558	59,4	64,2162
100	50,7690	53,8775	57,3913	61,3953	66,	71,3513

L.	Acres. 6½ Bolls.	6	5½	5¼	5	4½
10	8,5161	9,4285	10,56	12	12,8780	13,8947
20	17,0322	18,8571	21,12	24	25,7561	27,7895
30	25,5484	28,2857	31,68	36	38,6341	41,6842
40	34,0645	37,7143	42,24	48	51,5122	55,5789
50	42,5806	47,1428	52,80	60	64,3902	69,4737
60	51,0968	56,5714	63,36	72	77,2683	83,3684
70	59,6129	65,9999	73,92	84	90,1463	97,2632
80	68,1290	75,4285	84,48	96	103,0244	111,1579
90	76,7452	84,8571	95,04	108	115,9025	125,0527
100	85,1613	94,2857	105,60	120	128,7805	138,9474

L.	Acres. 4½ Bolls.	4¼	4	3¾	3½	3¼	3
10	16,5	18,2069	20,3077	22,9565	26,4	31,0588	37,7143
20	33,	36,4138	40,6154	45,9131	52,8	62,1176	75,4286
30	49,5	54,6207	60,9231	68,8695	79,2	93,1764	113,1429
40	66,	72,8276	81,2038	91,8261	105,6	124,2352	150,8572
50	82,5	91,0345	101,5385	114,7826	132,	155,2940	188,5715
60	99,	109,2414	121,8462	137,7391	158,4	186,3528	226,2858
70	115,5	127,4483	142,1539	160,6956	184,8	217,4116	264,
80	132,	145,6552	162,4616	183,6522	211,2	248,4704	301,7144
90	148,5	163,8621	182,7693	206,6087	237,6	279,5292	339,4287
100	165,	182,0690	203,0770	229,5652	264,	310,5880	377,143

EXPLA-

E X P L A N A T I O N.

This table, No. 6. is just a reverse of table No. 5. and an example or two will explain it sufficiently.

Suppose a farm paying a rent in money of L. 100 a year, when wheat was 14s. the boll, and barley 11s. 6½d. which farm is, upon experience, found to yield at a medium seven bolls the acre: Query, What number of acres will this farm contain?

Look in the table, where, in the first column, you will find L. 100; whence carry your eye forward to the column of seven acres, and, opposite to the L. 100, you will find sixty-six acres; which is the answer required.

But, although the rent of this sixty-six acres was L. 100 in the year 1754, when corn was low priced, it does not follow that L. 100 will be the fair rent when corn is higher rated. Rents of arable land are properly measured from the quantity of its product, not by one fixed number of pounds Sterling; the value of which varies according to circumstances. For example, 120 acres of land returning seven bolls the acre, is, by table No. 4. worth a rent, payable two thirds in wheat and barley in equal quantities, and one third in money, of 94.912 of wheat, the same quantity.

tity of barley, and L. 33,333 in money. If we suppose wheat to be at 18 s. the boll, and barley at 15 s. the question is, To what sum will the rent of sixty-six acres amount, payable two third parts in wheat and barley in equal quantities, and one third part in money?

By table No. 4. the proportional quantities of the grains are thus found. As 120 acres give 94,912 bolls of wheat and barley, so will 66 acres give 52,2016 bolls. This found, state the accompt thus:

Wheat, 52,2016 bolls at 18 s. the boll	46,98144
Barley, 52,2016 ditto 15 s. ditto	39,15120
Money the medium of wheat and barley	43,06632

Rent, instead of L. 100 as formerly, will
now amount to L. 129,19896

Thus, confining myself to one scheme for a rotation of crops, I have finished those calculations which seem naturally to have arisen from the curious question proposed by the Edinburgh Society. To have varied the scheme of rotation, would have led me into an unbounded field. By avoiding this inconveniency, the reader is already apprised, that the rents assigned in the tables for lands unfit for the production of wheat, must exceed the truth, supposing the farm to be kept in constant tillage, and the expence of a plough to be the same in every county in Scotland; but these

these facts, I believe, are not universally true ; and, when lands of inferior quality are judiciously laid out in grass and corn, from such management arises a problem, which I must leave to be solved by those who are particularly engaged in that mode of farming, when probably it may appear, that the rents assigned in the tables, which totally regard tillage, may be rather under than over rated.

In general, my aim has been to demonstrate, that the rents of arable lands may be discovered by the application of just principles ; and I must beg leave to recommend it to those who are of that opinion, or who may think with any degree of favour of those I have taken upon me to lay down, that they will not be backward to contribute towards carrying to perfection a design, which has so flattering an appearance of general utility.

That justice is due to all men, will not be denied ; and, in all cases, there are rules for obtaining it. Singular indeed ! if landlords and tenants are the only parties doomed to be excluded from the benefit of every equitable rule. This, at present, however, seems to be their unlucky situation ; to treat about a farm, they often meet, rather like enemies than friends, armed with artifice and deceit, when he who happens to be the most skillful in the exercise of those base and unmanly weapons, obtains a disgraceful victory.

F I N I S.

land, I believe, and not uniformly the same, when
lands of inferior quality are judiciously laid out in grass
and corn, from which a permanent and a profitable
I must leave to be solved by those who are particularly en-
gaged in that mode of farming, when probably it may ap-
pear, that the rents assigned to the tables, which totally re-
gard tillage, may be rather higher than over table.

In general, my aim has been to demonstrate that the
rents of arable lands may be determined by the application
of just principles; and I must beg leave to recommend it
to those who are of that opinion, or who may think it with
any degree of favour, that I have taken upon me to
lay down, that they may be backward to contribute to-
wards carrying to the public, which has to thank
ing an appearance of the same.



That justice is due to all men, will not be denied; and
in all cases, there are rules for obtaining it. In the in-
deed! if landlords and tenants are the only parties bound
to be excluded from the benefit of every equitable rule.
This, at present, however, seems to be their unhappy situa-
tion; to treat about a farm, they often meet, rather like en-
emies than friends; and I must confess, when
he who happens to be the most skillful in the exercise of
the pale and unmanly weapon, obtains a disagreeable vic-
tory.